

3. (amended) Method according to claim 2, characterized in that the serine acetyltransferase is a plant serine acetyltransferase or a bacterial serine acetyltransferase.

4. (amended) Method according to claim 60, characterized in that the serine acetyltransferase which is overexpressed in plant cells is a cysteine-insensitive serine acetyltransferase.

*C 20*  
~~SAT3~~ (amended) Method according to claim 4, characterized in that the serine acetyltransferase is a plant SAT, a bacterial serine acetyltransferase, a plant SAT rendered cysteine-insensitive by mutagenesis or a bacterial serine acetyltransferase rendered cysteine-insensitive by mutagenesis.

6. (amended) Method according to claim 60 characterized in that the serine acetyltransferase is overexpressed in the cytoplasm of plant cells.

*C 21*  
9. (amended) Method according to claim 62, characterized in that the serine acetyltransferase is SAT3 which is represented by SEQ ID NO: 2.

*C 21*  
12. (amended) Method according to claim 60, characterized in that the serine acetyltransferase is overexpressed in mitochondria.

*C 22*  
~~SAT3~~ 13. (amended) Method according to claim 12, characterized in that the serine acetyltransferase is overexpressed in the cytoplasm in the form of a mitochondrial signal peptide/serine acetyltransferase fusion protein, the mature functional serine acetyltransferase being released inside mitochondria.

*C 23*  
17. (amended) Method according to claim 60, characterized in that the serine acetyltransferase is overexpressed in chloroplasts of plant cells.

18. (amended) Method according to claim 17, characterized in that the serine acetyltransferase is overexpressed in chloroplasts by integration, into chloroplast DNA of

plant cells, of a chimeric gene comprising a DNA sequence encoding the serine acetyltransferase, under the control of 5' and 3' regulatory elements which are functional in chloroplasts.

C 23  
19. (amended) Method according to claim 17, characterized in that the serine acetyltransferase is overexpressed in the cytoplasm in the form of a transit peptide/ serine acetyltransferase fusion protein, the mature functional serine acetyltransferase being released inside chloroplasts.

S 24  
20. (amended) Method according to claim 19, characterized in that the serine acetyltransferase and transit peptide of the fusion protein are homologous.

S 25  
21. (amended) Method according to claim 19, characterized in that the serine acetyltransferase and the transit peptide of the fusion protein are heterologous.

C 24  
24. (amended) Method according to claim 13, characterized in that the serine acetyltransferase is a plant cytoplasmic serine acetyltransferase or a bacterial serine acetyltransferase.

C 25  
25. (amended) Method according to claim 23, characterized in that the transit peptide is a transit peptide from a plastid protein other than a chloroplast serine acetyltransferase.

Please cancel claims 1, 8, 14, and 27-30 and add the following new claims:

C 25  
26. (new) A method for increasing the production of cysteine, glutathione, methionine or sulfur-containing derivatives of methionine by plant cells and plants, said method comprising overexpressing serine acetyltransferase in plant cells transformed with a serine acetyltransferase or in plants containing said plant cells, whereby

overexpression of serine acetyltransferase results in the increased production of cysteine, methionine, glutathione, methionine or sulfur-containing derivatives of methionine.

61. (new) The method of claim 6 wherein the serine acetyltransferase is a plant cytoplasmic serine acetyltransferase.

62. (new) The method of claim 61 wherein the plant cytoplasmic serine acetyltransferase is from *Arabidopsis thaliana*.

63. (new) The method of claim 13 wherein the mitochondrial signal peptide comprises at least one signal peptide from a plant mitochondrial protein.

64. (new) The method of claim 63 wherein said mitochondrial signal peptide comprises the SAT1 signal peptide which is represented by amino acids 1 to 63 of SEQ ID NO: 6.

65. (new) The method of claim 19 wherein said serine acetyltransferase is a plant cytoplasmic serine acetyltransferase or a bacterial serine acetyltransferase.

66. (new) The method of claim 25 wherein said transit peptide comprises a plant plastid transit peptide and an N-terminal portion of a mature plastid protein linked by its N-terminus to the C-terminus of said plastid transit peptide.

67. (new) The method of claim 66 wherein said N-terminal portion of a mature plastid protein comprises less than 40 amino acids of the N-terminal portion of the mature plastid protein.

68. (new) The method of claim 67 wherein said N-terminal portion of a mature plastid protein comprises less than 30 amino acids of the N-terminal portion of the mature plastid protein.